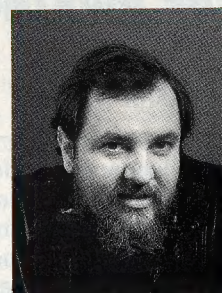


## PRODUCTION

# The Amiga Produces

JIM ST. LAWRENCE



**I**n Studio City CA, artist and animator William Maher roughs out his initial graphic concepts using an Amiga 2000 computer before producing them on expensive high-end computer systems.

In Glen Cove NY, designer Michael Assante lays out schematic diagrams for complex video printed circuit boards using his Amiga 2000HD.

In Toronto, music student Dave Niermeier has connected his Amiga 500 to a Roland D-20 synthesizer via a MIDI connection and composes music for school and other projects.

Meanwhile, in my living room, I use an Amiga 2500 computer to play Tetris, doodle at making music, keep a database for mailings, print videotape labels and brochures, and write this and other articles, scripts, speeches, and letters, (then send them out via attached modem.) For fun, I've captured whole sequences of time lapse video frames and combined them with simple animations. With the Amiga, I've prepared camera-ready copy for a training manual and created a 3-D animated title for a videotape my company donated to a charitable organization. For specialized video productions, I've used the Amiga as an inexpensive character generator and graphics platform for still frame and animated graphics created, of course, by real artists. And I've digitized sound into its memory chips and edited audio sequences for corporate video productions. Of the eleven different computers I've acquired in the last 14 years, the Amiga is the most fun.

Recently renewed interest in the Amiga computer by the video community isn't because it can do the normal things other microcomputers can do, even though it is one of the least expensive. The Amiga's main advantage is that it was designed as a video-compatible machine with powerful graphics and audio capabilities. As a consequence, it has attracted a collection of third-party developers, who have introduced a range of remarkable video production hardware and software, plus a devoted coterie of video makers, hobbyists, and enthusiasts. In fact, some very inexpensive—but effective—hardware and software have made the Amiga one of the most popular character generators in the video market today, according to Commodore Business Machines, the manufacturer of the Amiga.

Because it also manufactures MOS semiconductor chips, Commodore has been able to design specialized, very large scale integrated (VLSI) circuitry into their computer. Apple, on the other hand, whose Macintosh computer uses the same family of microprocessor chips as the Amiga (the Motorola

68000 series) relies on "off the shelf" chips for the rest of its circuitry. This means that in benchmark measurements of systems with the same microprocessors, the Mac is quite a bit slower than the Amiga. Or, as Michael Assante, chief designer of ProTools hardware for the Amiga explains, "if the Amiga didn't have its custom chips it would probably be four times its size and much slower."

Commodore has given the big, powerful chips that make up the heart of the Amiga women's names. "Agnus" (sic) for example, does memory management and "Denise" is responsible for video processing and display. Having these specialized chips speeds up the operations of the machine by allowing the central processing unit (CPU) of the Amiga to hand off tasks to them, freeing it up for other jobs.

"Just compare versions of DeluxePaint III (at about \$100, a popular Amiga paint program by Electronic Arts, San Mateo CA) running on a PC and on an Amiga," says Assante, "and you can see how the Amiga is optimized to move video memory around. You get very smooth cursor tracking. You pick up a big section of a picture as a brush and you press one of the hot keys to move it, or flip it over or rotate it, and it happens instantaneously, whereas with the PC it could take five to ten seconds."

Exploring an Amiga is quite an experience. For one thing, like the Macintosh, it has a mouse interface. You can double click on icons to make things happen. But it also has a command line interface (CLI), similar to the interface you get with MS-DOS systems like IBMs. I find I use a combination of the two quite naturally, generally favoring the mouse interface for manipulating the system and the CLI for more text-oriented activities.

Another interesting feature of the Amiga is its ability to multitask, to run several programs at the same time. After you get used to this capability you find yourself letting a collection of programs cook along while you zip over to yet another program to find relevant information, or even just to doodle with a paint program while something else carries on. Although it's true that Microsoft Windows 3.0 is now capable of this type of processing, Windows really needs one of the more expensive and powerful computer systems to run effectively. Other so-called multitasking systems simply freeze the programs that aren't immediately active, whereas the Amiga keeps all multitasking programs running simultaneously. There is a catch, though. I find the Amiga tends to "hang" somewhat more frequently than other systems, so more care is needed to ensure that files are saved to disk frequently.



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Even though its graphics capability is its strong suit, the Amiga can be a very effective sound processor too. It even has quite a good voice synthesizer built-in. For sound sampling and manipulation there are excellent stereo sound digitizers available costing less than \$100. The Amiga already comes with two separate sound channels, so interesting stereo effects are easily created. Most software developers have generally played to the Amiga's strength and have incorporated descriptive graphics into their user interface. The MIDI program that Dave Niermeier uses to control his Roland D-20 synthesizer is called Bars and Pipes. It uses the visual analogy of a plumbing system to manipulate musical tracks.

Back to video; in order to combine it with Amiga graphics a number of genlock cards have become available. They range in price from just under \$100 to nearly \$2,000. I've used or seen most of them in operation and they vary as widely in quality as in price. It would appear that video encoding—the process whereby the computer's separate red, green, and blue signals are combined into a single composite video signal—is a very difficult but crucial process in making good looking, technically acceptable video. Frankly, the very best results I've achieved have come from using a fully broadcast quality video encoder, and simply using the genlock device to lock the computer to house sync by feeding it a composite black signal.

Recently, there's been a whole new array of devices introduced for the Amiga, devices like the NewTek Video Toaster, Digital Creations' DCTV, and others. I've even seen a workable chroma keyer for under \$400. Most take advantage of Denise, the chip, and the speed of the Amiga computer to

process video in a way no other off-the-shelf microcomputer is able to do. Watching a Toaster demo can cause the chin to drop just a bit at the amazing variety of digital video effects (DVE) capabilities in so inexpensive a package. Still, it'll be a long time before Amigas can challenge the role of sophisticated broadcast devices, but there's definitely a growing and important role for them.

William Maher has been exploiting the Amiga's capabilities almost since its inception. Maher, a very talented visual artist and writer, once designed video arcade games on the Amiga for Bally Sente at a time when a surprising number of arcade games used Amiga circuitry as part of their gaming units. He has used Amigas to design projects for Walt Disney as an Imagineer in that company's show design department.

"I work with all sorts of high-end paint systems, Mac II-based systems and others, and I think they're clearly inferior to DeluxePaint III," Maher says.

Today Maher's company, Presentationmation, specializes in creating animatics and video story boards for movie producers. Storyboards can be scanned into an Amiga, colored, painted, and animated. "It's a much more powerful way to convey what the final product is going to be like," says Maher. "I've long been an enemy of storyboards because they're so ungainly. Now the presentation is in color, reasonably cheaply produced, and it's on TV."

The Amiga is a phenomenon, and a very important one. It can be seen as a kind of low-priced tool in a very high priced industry. In a way, it represents the future, when video tools are a dime a dozen, and anyone can make video. Talent and distribution, however, are another question. □

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